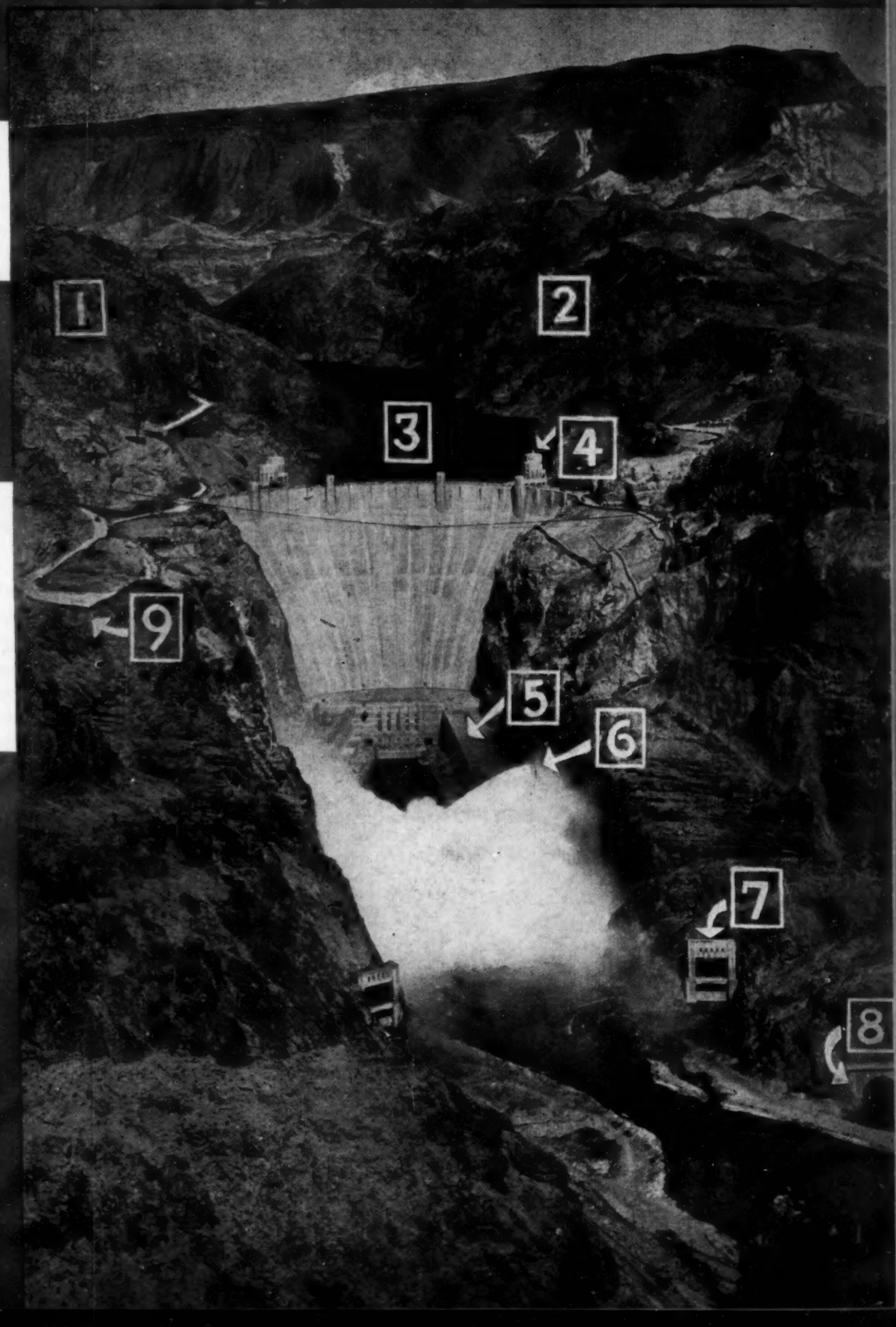
JUNIOR SCHOLASTIC

WEEK OF FEB. 24
VOL. 8 NO. 5 1941

BOULDER DAM



NUMBERS ON PHOTO SHOW: (1) NEVADA SIDE OF BLACK CANYON WALL; (2) ARIZONA SIDE; (3) COLORADO RIVER; (4) ARIZONA INTAKE TOWERS; (5) ARIZONA POWERHOUSE; (6) CANYON WALL OUTLETS TO CONTROL WATER FLOW; (7) STONEY GATE OUTLET; (8) ARIZONA SPILLWAY OUTLET; (9) U. S. HIGHWAY 93 FROM LAS VEGAS, NEV., CROSSES CREST OF BOULDER DAM AND HEADS FOR WILLIAMS, ARIZ. (SEE DRAWING "HOW BOULDER DAM WORKS" ON PAGE 9.)

TEACHERS EDITION

International

BRITISH PARACHUTE TROOPS (above) carry a light machine-gun with tripod mount; oxygen mask and small tank; a lap-type and seat-type parachute, leaving his back free for his pack containing hand grenades, dynamite, concentrated food.

Map by H. C. Detje, Copyright, 1941, by the Newspaper PM, New York.

MAP ABOVE shows Mediterranean, north and east African area where British are pushing back Italian armies. In Libya, British troops advanced westward into the province of Tripolitania, after capturing Benghazi. British patrol units went deep into the desert to capture Traghen, an oasis near Murzuck.

BRITISH 'CHUTISTS IN ITALY

For the first time in the war, British parachute troops made an invision of the enemy's territory.

On the night of Feb. 10, British planes from Greek bases flew over the provinces of Calabria and Lucania in southern Italy. The planes were delivering parachute soldiers. How many planes? How many parachute soldiers? Neither the British nor the Italian reports gave the number.

It was a moonlight night, so the planes approached Italy at a high altitude, and then glided down noislessly so as not to attract attention. At an altitude of about 2,000 to 2,500 feet, the parachute soldiers dropped out.

The provinces of Calabria and Lucania are thinly-populated. Through them runs the Apulian Aqueduct, which carries drinking water to supply 2,700,000 Italians in 302 cities and towns.

There are also two big hydro-electric (water-power electric plants) in the Calabria-Lucania area. These power plants supply electricity for the railroads of southern Italy.

WHY DID THEY COME?

It is not known just what their purpose was, or how much damage they succeeded in doing. Italian and British officials gave out very little information.

The Italians announced that all the parachute soldiers were captured after some fighting. The Italians said that the invaders had intended blowing up the aqueduct and power plants. The British government in London denied this.

British government officials said that the 'chutists had intended dynamiting harbors in southern Italy.

None of these explanations seemed satisfactory. Were the 'chutists the vanguard of a big attempt to invade southern Italy with thousands of British troops?

Did something happen to change British plans, after the 'chutists had fallen to earth?

The whole incident is a mystery.

★ HEADLINE NEWS

WEEKLY REVIEW OF NATIONAL AND WORLD EVENTS

WAR REVIEW

The Balkans

The peoples of the Balkan nations last week trembled in fear. They were afraid that the war was going to spread in their direction.

One of the Balkan nations, Greece, has been in the war five months. The Italians invaded Greece on Oct. 28, 1940. But the war turned out to be a "wrong way war," as far as the Italians are concerned. Instead of the Italians conquering Greece, the Greeks drove the Italians back into Albania.

Then the Germans prepared to go down and help the Italians out of their trouble.

According to the plan of the Germany-Italy Axis, the Germans would attack Greece from the north while the Italians are attacking from the west. Thus Greece would be "pinched" between two enemies.

But Germany does not border on Greece. The Germans would have to go through several Balkan countries in order to attack Greece.

BALKAN LINEUP

Let's call the roll of these countries, and see just how they stand:

1. Hungary is already a member of the Axis, and will allow the Germans to pass through.

2. Rumania is also a member of the Axis, and has been occupied by German soldiers. These soldiers have gathered on the north bank of the Danube River, which is the Rumania-Bulgaria border. They are ready to cross the river into Bulgaria. One newspaperman wrote that they are "like runners at the starting line waiting for the starter's gun."

Rumania and Britain were friends for many years. But now Rumania has gone over to Germany's side. Rumania was too weak to resist.

3. Bulgaria nervously waited for the German soldiers to march down from Rumania. The Bulgarians did not want the Germans to come. But Bulgaria was not strong enough to resist the powerful German army.

A newspaper in Sofia, Bulgaria's capital, said in an editorial: "To ask us to oppose Germany is the same as asking us to commit suicide."

Germans dressed in civilian clothes arrived in Bulgaria to take charge of the airports. They also prepared the south bank of the Danube for pontoon bridges, on which the German army could cross.

The Bulgarians were also worried about Turkey, which is an ally of Britain.

BULGAR-TURK TREATY

4. Turkey had encouraged Bulgaria to stand firm against the Germans. The Turks said they would fight if Germany occupied Bulgaria. Then Turkey signed a non-aggression pact with Bulgaria. This means that the two countries will not fight each other or any other country.

But the Turks said that the treaty would not keep them from resisting the Germans.

5. Yugoslavia has been neutral in the war up to now. Last week two Yugoslav government leaders met with Chancellor Adolf Hitler, dictator of Germany. They were Premier Dragisha Cvetkovitch and Foreign Minister Cincar-Markovitch. The meeting took place at Berchtesgaden, Germany.

Chancellor Hitler asked the Yugoslavs to sign the Axis pact, and bring their country into the Axis. He also demanded that Germany be allowed to send troops through Yugoslavia.

After the meeting the two Yugoslavs went home to Belgrade, their country's capital. As Junior Scholastic goes to press, they have not told whether they said "yes" or "no" to Hitler's demands.

General Franco (left), dictator of Spain, and Premier Mussolini, dictator of Italy, photographed at Bordighera, Italy.

GENERAL FRANCO VISITS MUSSOLINI

Generalissimo Francisco Franco, dictator of Spain, last week journeyed by automobile to Italy. There, at the little town of Bordighera, he met Premier Benito Mussolini of Italy. The two dictators talked together in a secret conference.

After the conference, newspapermen were not told what Franco and Mussolini had talked about. One guess is that they talked about Gibraltar.

The German-Italy Axis would like to take Gibraltar away from the British. Then the Axis would control the narrow Strait of Gibraltar, "bottleneck" of the western Mediterranean.

How could Spain help in an attack on Gibraltar? For one thing, there are big guns on Spanish soil facing Gibraltar. While these guns fired away, German and Italian planes might fly from Spanish bases to bomb British troops at Gibraltar.

With Franco's permission, German soldiers could cross Spain to attack Gibraltar.

On his way home to Spain, Generalissimo Franco stopped at Montpellier, France, to talk to Petain.

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Civics in the News

NATIONAL DEBT LIMIT SET AT $65 BILLION

How does Uncle Sam raise the money to pay for his expenses? There are two methods:

1. By taxes on incomes, and other taxes.
2. By the government borrowing money from the banks and from individual persons.

Would you like to lend the government some money? Any postoffice will arrange this for you. Persons who want to lend the government money can lend as little as $18.50. For this, the government gives them a "Baby Bond," which can be redeemed (cashed in) for $25 at some future date. The difference between $18.50 and $25 is the interest the government pays for the use of the money.

OWED TO BANKS, INDIVIDUALS

The amount of money that the government owes to banks and individual persons is called the national debt.

As our nation has grown, the national debt has grown at the same time. In 1830, the national debt was 48 million dollars. As the nation grew, the people had more money, and the government was able to borrow more. During the war of 1914-1918 (which we entered in 1917), our government's debt rose to 25 billion.

By 1930, this had been reduced to 16 billion. But the depression put so many people out of work, that the government had to spend large sums of money to provide work for them. This was the main cause of the increase in the national debt from 1930 to 1938.

International

S.S. AMERICA, finest liner flying the U. S. Flag, makes her first trip through the Panama Canal, en route from New York to California. Photo above shows her at Gamboa, halfway mark along the 40-mile waterway connecting the Atlantic and Pacific.

CARTOON OF THE WEEK

I HOPE YOU DON'T MIND IF I LET MY BELT OUT A FEW NOTCHES BEFORE I TACKLE THAT!
THE NATIONAL DEBT
DEFENSE MENU
LIMIT
65,000,000,000

Talburt in Scripps-Howard Newspapers

Better let out a few notches

(Read the accompanying article on the national debt)

Now there is another cause which has increased the national debt. This is our defense program. In June, 1940, Congress increased the "ceiling" to which the national debt could go. It was increased from 45 to 49 billion dollars.

PUBLIC DEBT ACT OF 1941

Now, less than a year later, Congress has raised the "ceiling" to 65 billion dollars. This was done by Congress passing a bill called the Public Debt Act of 1941.

The bill allows the government to borrow as much more money as needed until a total of 65 billion dollars is owed by the government to banks and individuals.

If and when the government borrows up to this "ceiling," Congress would have to decide how much higher to raise it.

Our national defense program is going ahead at a cost of about 10 billion dollars a year. If Congress passes H. R. 1776 (the Lease-Lend Bill), we will be spending about 5 billion more a year on aid to Britain.

LEASE-LEND BILL BEFORE SENATE

The Senate Foreign Relations Committee voted 15 to 8 in favor of the Lease-Lend Bill (H. R. 1776), and sent it to the floor of the Senate for debate.

As this issue of Junior Scholastic went to press, the Senators were nearing the end of their arguments for and against the bill.

It was expected that the Senate will pass the bill.

The Senate Foreign Relations Committee made several slight changes in the bill.

JAPAN'S NEW AMBASSADOR

Admiral Kichisaburo Nomura, the new Japanese Ambassador to the United States, arrived in Washington, D. C., last week to begin his duties.

As the new Ambassador arrived, there were signs of coming trouble in the Far East. The Japanese navy has been moving to the south, toward Australia and other British territories. Japan now has air and navy bases in French Indo-China. From these bases Japan could attack Singapore, Britain's greatest Far Eastern navy base. (See article and map, pages 2 and 3, last week's Junior Scholastic.)

There were rumors that Japan is getting ready to seize British possessions in the Far East.

AUSTRALIANS TAKE WARNING

The Australian government feared that Japan was about to attack. The government issued a warning to Australian citizens. "Prepare to resist possible invasion," said the warning.

The Australian warning alarmed other nations which have interests in the Far East.

The U. S. State Department urged all United States citizens in the Far East to come home. The wives and children of U. S. army officers in the Philippines prepared to sail for the U. S. A.

Meanwhile, Ambassador Nomura called on President Roosevelt at the White House. Secretary of State Cordell Hull went with the new Ambassador.

Wide World

THE JAPANESE AMBASSADOR to the United States arrives in Washington, and is greeted at the railroad station by representatives of three nations. By George T. Summerlin, Chief of Protocol of the U. S. State Department (directly facing the Ambassador); Hans Thompsen, Counselor of the German Embassy; and Marchese Alberto Rossi Longhi, Minister Counselor of the Italian Embassy (facing camera).

The three men talked for 20 minutes in a spirit of friendliness.

President Roosevelt said that there are serious problems which might cause trouble between the United States and Japan. But, the President added, he hopes that these problems can be settled peacefully.

U. S. INFLUENCE

Many people believe that only one thing is keeping Japan from attacking British and Dutch possessions in the Far East: that is the fear that the United States might take strong action against Japan.

There are some acts, short of going to war, which the United States could take against Japan. One would be to stop selling things to Japan.

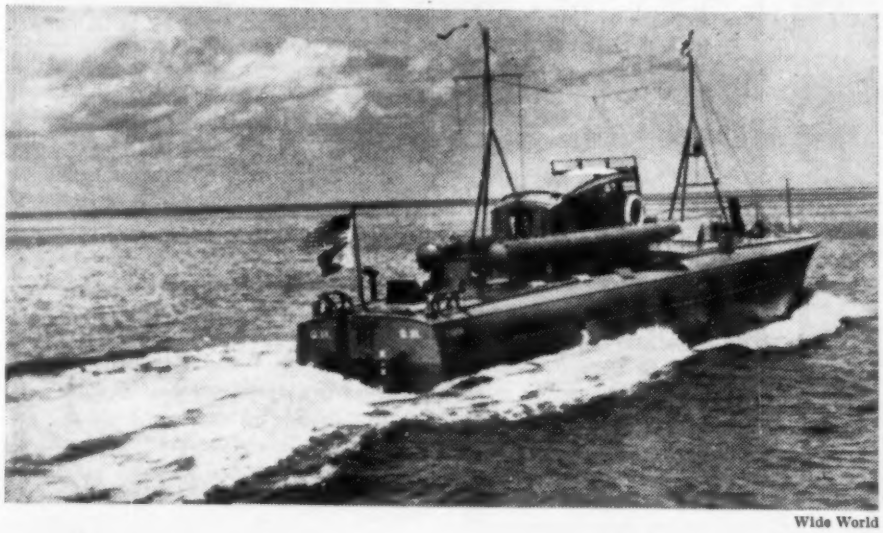
Japan has depended heavily on gasoline, oil, iron and other metals, machinery, automobiles and trucks, airplane parts, and hundreds of other things from the United States.

President Roosevelt has the power to embargo (stop the sale) of these things to Japan. The President has already stopped the sale of aviation gasoline and scrap iron to Japan.

Last Monday the Japanese government said that the United States was responsible for the fear that war will spread in the Far East.

The Japanese pointed out that the U. S. Government is planning to fortify Samoa and Guam. The Japanese say that this is not a "peaceful act." They say we should keep our armed forces in the Western Hemisphere.

"MOSQUITO" TORPEDO BOAT IN MANILA HARBOR



Wide World

U. S. DEFENSE IN PHILIPPINES

The U. S. defense program includes the Philippine Islands, which are under U. S. protection. The Philippines are supposed to gain full independence in 1946. This is according to plans made four years ago between the U. S. Government and the Philippines.

With Japan on the warpath, the United States is co-operating with the Philippine government in building defenses. More than 10,000 U. S. Army regulars are stationed there. The U. S. Navy has a base at Manila.

Photo at left shows one of the U. S. "mosquito" torpedo boats in Manila harbor. These boats patrol the shore; can make 50 to 60 miles per hour. They have two torpedo tubes and deck machine-guns.

FARM SCENE IN ICELAND: Only one-seventh of the land is fit for farming. Principal crops are potatoes, turnips, and hay. The few trees in Iceland are stunted in growth.

MOUNTAIN CLIMBERS pause for a rest on one of Iceland's 120 glaciers. Ice fields and glaciers cover about one-eighth of Iceland's 40,500 square miles of territory.

GERMAN PLANES RAID

ICELAND

In normal times, very little news comes from Iceland. The reason is that not much happens there.

But during the past year, Iceland made front-page news on three occasions. The first occasion came last April when Iceland's congress (called the *Althing*) declared Iceland's complete independence from Denmark.

The reason for this was the German invasion and occupation of Denmark. King Christian of Denmark had to take his orders from the German army. The people of Iceland, who had been loyal subjects of the King of Denmark, did not want to follow him while he was under German control.

A month later, on May 10, 1940, Iceland was in the news a second time. The British landed troops there. The purpose of this move was to keep the Germans from occupying Iceland.

Two weeks ago, on Feb. 9, Iceland again made front-page news. German patrol planes flew over Reykjavik,★ capital of Iceland, and machine-gunned British planes at the Reykjavik airport.

The German planes disappeared as suddenly as they had come, and were not heard from again. They had a long flight (1,000 miles) back to the coast of Norway.

Iceland is sometimes called "the island of ice and fire." It is called the island of ice because of its vast ice-fields and glaciers, which cover a large area in the interior of the island.

Iceland is called the island of fire because of its volcanoes. There are more than 100 volcanoes, 30 of which have had eruptions.

Besides the volcanoes, there are many hot springs and geysers. The Icelanders pipe the hot water to Reykjavik, to provide heat for homes, schools, and office buildings.

Americans have a special interest in Iceland. Many historians say that Leif Ericcson,★ who was born in Iceland, landed on the North American continent, along the New England coast, in the year 999 or 1000.

THE GULF STREAM comes close enough to Iceland to warm the water for swimming during summer. Photo shows Icelanders enjoying the water in one of the many inlets and fjords of the island.

Photos by P. C. C.

DISTANCES marked on map below tell why Britain wants to keep Iceland out of Germany's hands. From Iceland, German planes and submarines could make more raids on British shipping. Flight from Greenland to Newfoundland is 850 miles—a short hop for planes.

...ary copyright, 1941, by the Newspaper ..., New York.

★ See pronunciations, page 14

NEW MICROSCOPE SHOWS WORLD OF SMALL THINGS

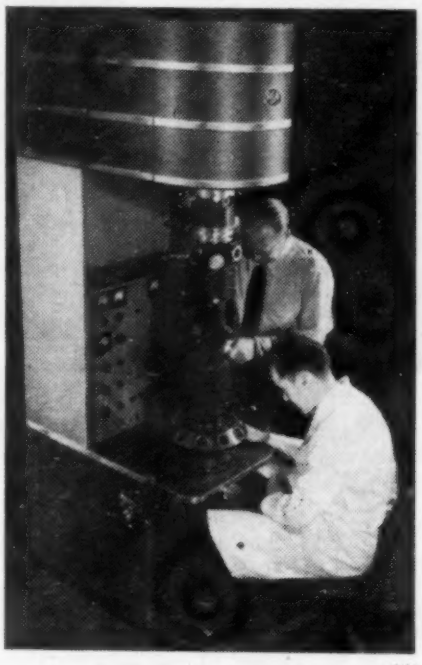
A super-microscope, which uses electrons instead of light, has been developed by scientists of the Radio Corporation of America.

The ordinary microscope magnifies objects to about 1,500 times their size. The electron microscope magnifies them from 40,000 to 100,000 times their size.

A human hair viewed through the electron microscope would appear to be the size of a telephone pole.

A new world of small things can be seen through the electron microscope.

By use of the electron microscope, molecules of the chemical compounds have also been seen for the first time.



RCA

ELECTRON MICROSCOPE

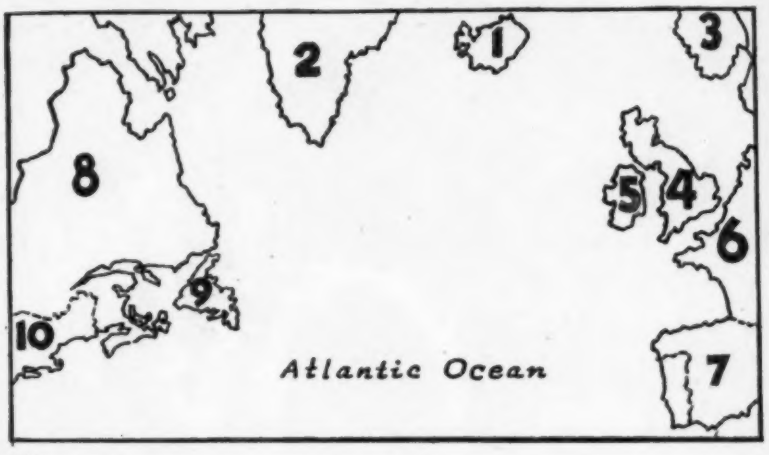
Dr. V. K. Zworykin (standing) head of the RCA Electronic Research Laboratory, under whose supervision James Hillier (at the controls) and a group of associates developed the new Microscope.

Streptococcus and tuberculosis germs can be seen through the ordinary microscope. By use of the electron microscope, scientists can study the internal structure of these germs.

The electron microscope is housed in a steel cabinet which stands higher than a man (see cut). At the back of the cabinet are the electrical controls. The central portion of the instrument is the steel tube in which the electron beam is focused. The images appear in a series of round windows at the bottom of this tube.

NEWS QUIZ

Test yourself! If you give the right answers, you will have a total score of 100. How close can you come? Answers appear in the Teachers Edition.



1 MAP QUIZ

The map above shows lands bordering the North Atlantic, with numbers marking places you are asked to identify. The map, with names marked, appears on the opposite page. First read the article on the opposite page and examine the map. Then fold back the page and do not consult it until you have taken the following quiz. How many answers can you get right without looking at the original map?

Fill in the place names on the following lines, to correspond with numbers on map above:

1. _____ 2. _____ 3. _____
4. _____ 5. _____ 6. _____
7. _____ 8. _____ 9. _____ 10. _____

Score 5 points for each correct answer. Total 50. My score____

2 THE NATIONAL DEBT

Congress recently passed the Public Debt Act of 1941 which allows the Government to borrow up to (check the right answer)

$65,000 $650,000 $6,500,000 $650,000,000
$65,000,000,000 $65,000,000,000,000

Score 10 points for the correct answer. My score ___

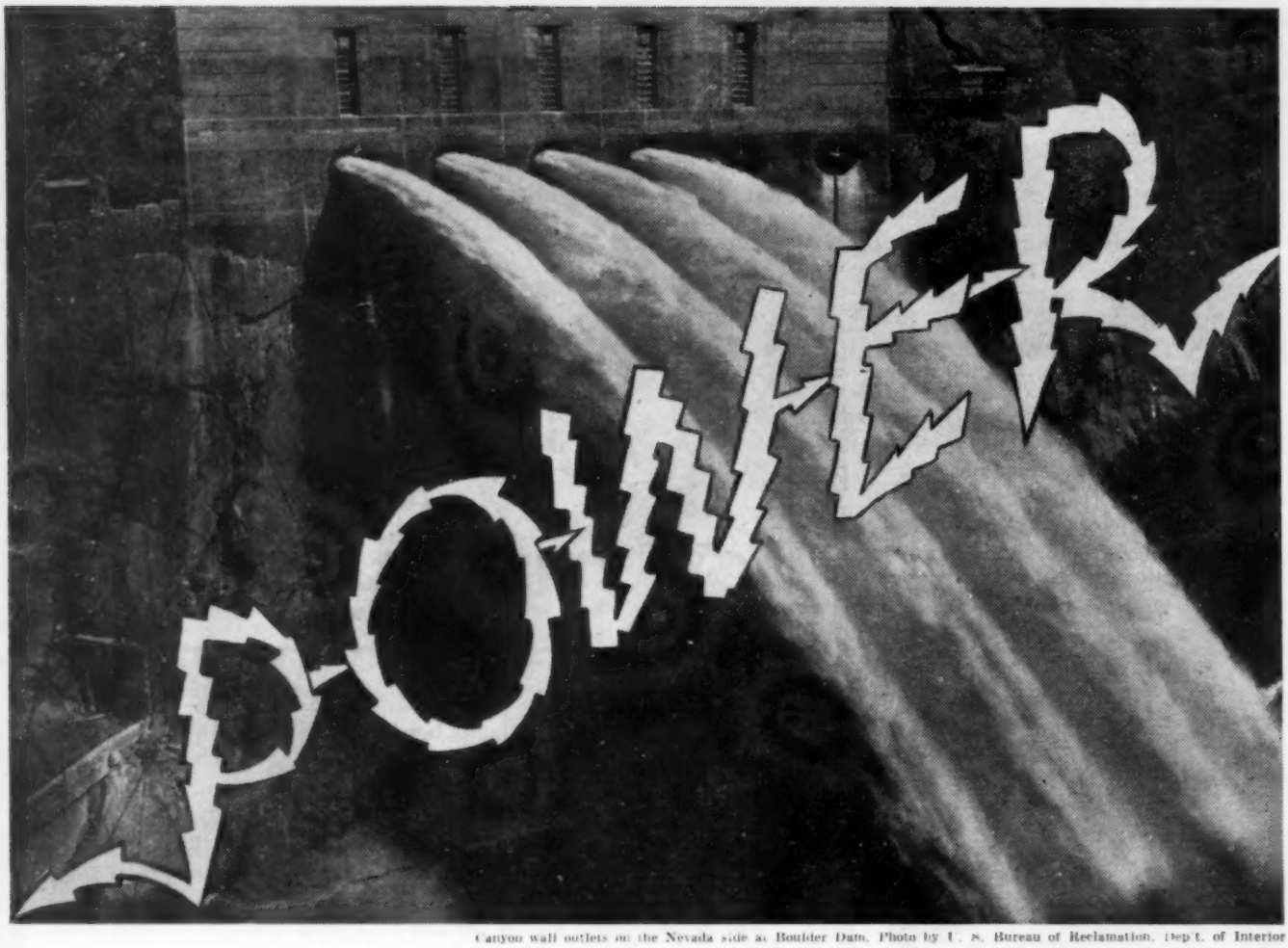
3 TRUE-FALSE QUESTIONS ON THE WAR

Mark each of the following statements T (for True) or F (for False). Score 5 points for each correct answer. Total 40.

_ Iceland is now occupied by German troops.
_ Iceland is now occupied by British troops.
_ Iceland is under the rule of the King of Denmark.
_ The U. S. has stopped selling aviation gasoline and scrap iron to Japan.
_ Japan's new Ambassador to the U. S. and President Roosevelt had a talk at the White House.
_ The National Debt refers to the amount of money our country owes other countries.
_ Rumania and Hungary are members of the German-Italy Axis.
_ Premier Mussolini of Italy recently had a talk with General Franco of Spain.

My score ___

My total score ___



Canyon wall outlets on the Nevada side at Boulder Dam. Photo by U. S. Bureau of Reclamation, Dep't. of Interior

IN our recent theme articles we have measured some of the important resources of the Americas—the iron ore and coal for making steel, the copper, aluminum and other metals of modern industry.

We saw how these raw materials were made into machines of peace and machines of war.

Now we come to one of the most important resources of all—the resources which makes these machines go. Its name is POWER!

OR CALL IT ENERGY

Another name for power is energy. It's something you've got in your own arms and legs and body. Do you ride a bicycle? Who provides the power, the energy?

For centuries and centuries, most of the work of the world was done by the power of man's own body. Sometimes he had animals helping him to do certain work, like plowing.

If he lived near a stream of water, he built a water-wheel which was turned by the flowing stream. The water-wheel was geared to other wheels which turned machinery for grinding grain, operating sawmills, and lifting hammers to pound iron. In towns and cities, water-wheels operated lathes and drills in machine shops and factories, and looms in woolen and cotten mills.

When, in the year 179, James Watt patented his steam engine, a new Age of Power began. New kinds of machinery were invented to do the work that man used to do with his hands. More and more coal was needed to operate the steam engines that turned the machinery.

Railroads were built to carry machinery, coal and manufactured goods to all parts of the country. Iron and steel mills operated full blast to meet the new demands.

DEMAND FOR PETROLEUM

The gas engine ★ was perfected, and this created a big demand for another source of power—petroleum.

Today the power that runs our factories, mills, railroads, ships, automobiles, airplanes, and machines of war comes from the three sources we have mentioned. In their historical order, they are: (1) falling water; (2) coal; (3) petroleum.

We said that an Age of Power began with James Watt's steam engine in 1769. Note what happened in the years that followed: (1) increase in the use of machinery; (2) growth of industries; (3) increase in the population of industrial centers (cities).

INDUSTRIAL REVOLUTION

Because of this change in the way people worked and lived, historians have two other names for the Power Age. One is the Machine Age. Another is the Industrial Revolution. The word *revolution* is used in this sense to mean "a change in our way of working and living."

Today most of the machinery in our factories and mills is run by electricity. Electricity itself is power. But electricity has to be made, and to make it we use our three sources of power falling water, coal, and petroleum.

Nearly 40% of the electricity used

★ See Vocabulary Drill on Page 14

ISSUE OF FEB. 24 1941

TEACHERS COMPANION TO JUNIOR SCHOLASTIC

CLASSROOM AND MAGAZINE WORKING TOGETHER

QUARTERLY REVIEW; 50 TEST QUESTIONS

EVERY fourth issue we will publish a Quarterly Review of 50 objective test questions, embracing material in recent issues of Junior Scholastic. The questions which appear here are based on Headline News and Theme Articles of Junior Scholastic issues as follows: Jan. 27, Feb. 3, Feb. 10, Feb. 17, and Feb. 24 (current issue).

With each question appears the date of issue of the magazine in which that question is answered, thus: 1-27. (Issue of Jan. 27.)

MATCHING QUESTIONS

Date of Issue		
1-27	1. alloy	___British ambassador to U. S.
1-27	2. H.R. 1776	___bauxite
2-3	3. Ferdinand de Lesseps	___Chief Justice, U. S. Supreme Court
2-3	4. brass	___coal, oil, water
2-3	5. bottlenecks	___de Gaulle
2-3	6. McReynolds	___power for railroads
2-3	7. Halifax	___Supreme Court Justice who resigned Feb. 1, 1941
2-3	8. open hearth furnaces	___Iceland
2-3	9. Brazil	___mixture of metals
1-27	10. Jan. 20, 1941	___Lease-Lend Bill
2-3	11. Charles E. Hughes	___First 10 Amendments to the Constitution of U. S.
2-10	12. Charles M. Hall	___Colorado River
2-10	13. aluminum	___block or bar of metal
2-24	14. Boulder Dam	___made important discovery in aluminum
2-24	15. sources of power	___Has largest iron ore deposits in world
2-24	16. third rail	___Start of Third Term
1-27	17. Free France	___Method used in making 90 per cent of our steel
2-10	18. Bill of Rights	___Gibraltar, Suez
2-3	19. ingot	___copper mixed with zinc
2-24	20. Reykjavik	___Suez Canal

Answers to Matching Questions. (Numbers to be filled in spaces provided in right-hand column, in the following order 7, 13, 11, 15, 17, 16, 6, 20, 1, 17, 18, 14, 19, 12, 9, 10, 8, 5, 4, 3.

COMPLETION QUESTIONS

Date of Issue	
1-27	1. Uncle Sam's plan of expenses and income for the coming year is called a _____.
1-27	2. When a bill originating in the House is passed, it is sent to the _____.
2-3	3. Before it can become a law it must be passed by both houses and signed by _____.
2-3	4. The Suez Canal connects the Mediterranean with the _____ Sea.
2-3	5. The President's appointment of a judge to the Supreme Court must be approved by the_____.
2-10	6. Nearly all the world's supply of nickel comes from _____.
2-17	7. Boulder Dam is half in Arizona and half in _____.
2-17	8. A metal made from brine and sea water is _____.
2-17	9. The Japanese changed the name of Manchuria to _____.
2-17	10. The most important port of the Malay States is _____.
2-10	11. Greeks and Italians are fighting in _____.
2-24	12. For fuel, a diesel engine uses _____.
2-24	13. James Watt patented a _____ engine in 1769.
2-24	14. Another name for the Power Age is the _____ Revolution.
2-24	15. The British landed parachute troops in _____.

Answers to Completion Questions. 1. Budget. 2. Senate. 3. The President. 4. Red. 5. Senate. 6. Canada. 7. Nevada. 8. Magnesium. 9. Manchukuo. 10. Singapore. 11. Albania. 12. Oil. 13. Steam. 14. Industrial. 15. Italy.

MULTIPLE CHOICE QUESTIONS

Date of Issue	
1-27	1. Copper tools have been used as far back as (a) 5000 B.C.; (b) 1000 B.C.; (c) 1776; (d) 1930.
1-27	2. The largest single copper deposit in the world is in (a) Arizona; (b) Chuquicamata; (c) Montana; (d) Mexico.
1-27	3. A mixture of copper and tin is called (a) brass; (b) zinc; (c) bronze; (d) steel.
1-27	4. The best electrical conductor is (a) silver; (b) copper; (c) aluminum; (d) iron.
1-27	5. Gibraltar's distance from Africa is (a) 1 mile; (b) 9 miles; (c) 14 miles; (d) 25 miles.
2-3	6. The largest manufacturing industry in the United States is (a) cigarettes; (b) steel; (c) paper; (d) textiles.
2-3	7. To make steel stronger and harder it is mixed with (a) lead; (b) bauxite; (c) manganese; (d) tin.
2-10	8. The Chief of State of Unoccupied France is (a) Petain; (b) de Gaulle; (c) Uganda; (d) Weygand.
2-10	9. In 1852, the cost of aluminum was $545 per pound. Today a pound costs (a) 17c; (b) $1.00; (c) $10.00; (d) $200.
2-10	10. The best known aluminum alloy is (a) silicon; (b) duralumin; (c) cryolite; (d) alumina.
2-10	11. Wendell Willkie visited (a) Germany; (b) Italy; (c) Great Britain; (d) Russia.
2-24	12. The water around Iceland is warmed by (a) the Greenland Drift; (b) Labrador Current; (c) Gulf Stream; (d) geysers.
2-17	13. Singapore is on (a) the Balkan Peninsula; (b) the Malay Peninsula; (c) the Iberian Peninsula; (d) the Kanin Peninsula.
2-17	14. Singapore is a center of trade in (a) lead and zinc; (b) lemons and grapefruit; (c) cotton and wool; (d) tin and rubber.
2-24	15. Iceland is now occupied by (a) British troops; (b) German parachutist troops; (c) the U. S. Marines.

Answers to Multiple Choice Questions: 1 (a). 2 (b). 3 (c). 4 (a). 5 (c). 6 (b). 7 (c). 8 (a). 9 (a). 10 (b). 11 (c). 12 (c). 13 (b). 14 (d). 15 (a).

ANSWERS: NEWS QUIZ, PAGE 7

1. (1) Iceland. (2) Greenland. (3) Norway. (4) Great Britain. (5) Eire. (6) France. (7) Spain. (8) Canada. (9) Newfoundland. (10) U. S. A.
2. $65,000,000,000.
3. F, T, F, T, T, F, T, T.

ANSWERS: IMPROVE YOUR READING, PAGE 14

1. (b) 2. (a) 3. (c) 4. (a)

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2. How far is it by plane from the coast of Norway to Reykjavik? What country now controls Norway? Iceland?
3. How many miles is it from Reykjavik to the southern tip of Greenland? From there to Newfoundland?
4. Describe Iceland. How large is it? How many people are there? What do they do for a living? How much of the territory is suitable for farming? How many glaciers are there? Volcanoes?

GROUP III—JEAN SIBELIUS—Pages 12, 13

1. Who is Jean Sibelius? What is his native land? How old is Sibelius today?
2. Why did Sibelius compose *Finlandia*? In what two wars did it serve as an inspiration for the people of Finland?
3. What is *sisu*?
4. Tell a little bit of Finland's history; its relationship to Sweden and Russia; its "darkest period"; its persecution by Russia.

GROUP IV—THE NATIONAL DEBT—Page 4

1. How does the Government raise money to pay its expenses? (two general methods).
2. What is meant by "the national debt"?
3. What limit has Congress just set for the national debt? What are some of the unusual expenses of the Government at present?

COMING NEXT WEEK

Theme Article: Cotton in the Americas. Solving the problem of over-production in the U. S. The Dep't. of Agriculture's "Cotton Stamp Plan." Cotton in South America.

SUGGESTED ACTIVITIES

Theme Article—POWER. Is there a dam within easy access? Arrange to have your class visit the dam. Be sure one of the engineers or superintendents is available to talk to the pupils.

Does your community have its own electric power plant? Arrange to visit this, or one in a nearby community.

List on the blackboard the factories and mills in your community. What are some of the machines used in the factories? What work do they do? Where do they get their power?

Appoint a committee to visit the local coal dealer. Ask him where he gets his coal, what kinds of coal he sells, the names used to describe various sizes of coal, how the coal is transported to his coal-yard.

Make an appointment with a distributor of fuel oil. Ask him where he buys the oil, to whom he sells it, how it is transported to him. Perhaps he would be willing to come to the school to talk to the pupils.

INDEPENDENCE DAYS

Here's a lineup of All-American Independence Days. which you may want to post on the board. It also may stimulate classroom observance of these days, with reports on the "history behind the day."

Argentina	May 25, 1810	Haiti	Jan. 1, 1804
Bolivia	Aug. 6, 1825	Honduras	Sept. 15, 1821
Brazil	Sept. 7, 1822	Mexico	Sept. 16, 1810
Chile	Sept. 18, 1810	Nicaragua	Sept. 15, 1821
Colombia	July 20, 1810	Panama	Nov. 3, 1903
Costa Rica	Sept. 15, 1821	Paraguay	May 14, 1811
Cuba	May 20, 1902	Peru	July 28, 1821
Domin'n Rep.	Feb. 27, 1844	United States	July 4, 1776
Ecuador	Aug. 10, 1809	Uruguay	Aug. 25, 1825
El Salvador	Sept. 15, 1821	Venezuela	July 5, 1811
Guatemala	Sept. 15, 1821		

TEACHERS COMPANION TO JUNIOR SCHOLASTIC, weekly supplement to the regular pupil edition of Junior Scholastic. TEACHERS COMPANION is inserted in the regular edition of Junior Scholastic and mailed separately to teachers only. Editor: Gertrude H. Selkowe. Associate Editors: A. H. Holtz, H. B. Selkowe. Editorial Office: Junior Scholastic, Daily News Building, 220 East 42d Street, New York, N. Y. For subscription rates see bottom of Page 3.

NOTES AND ASSIGNMENTS

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POTENTIAL POWER

water power, we have enough
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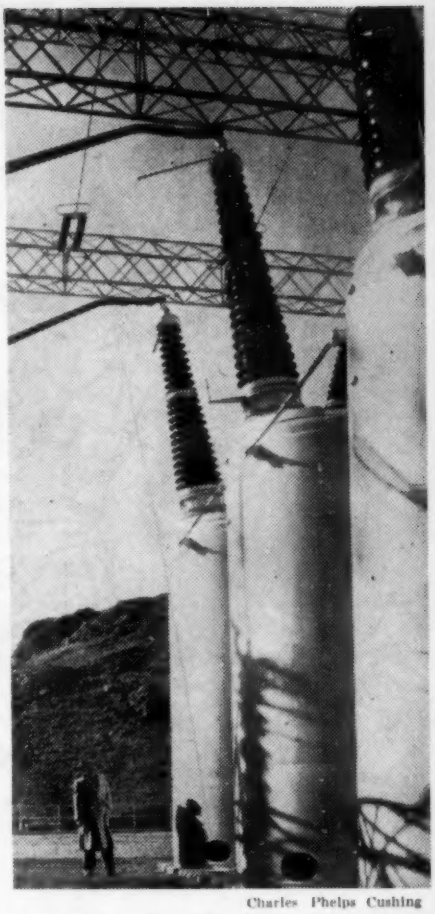
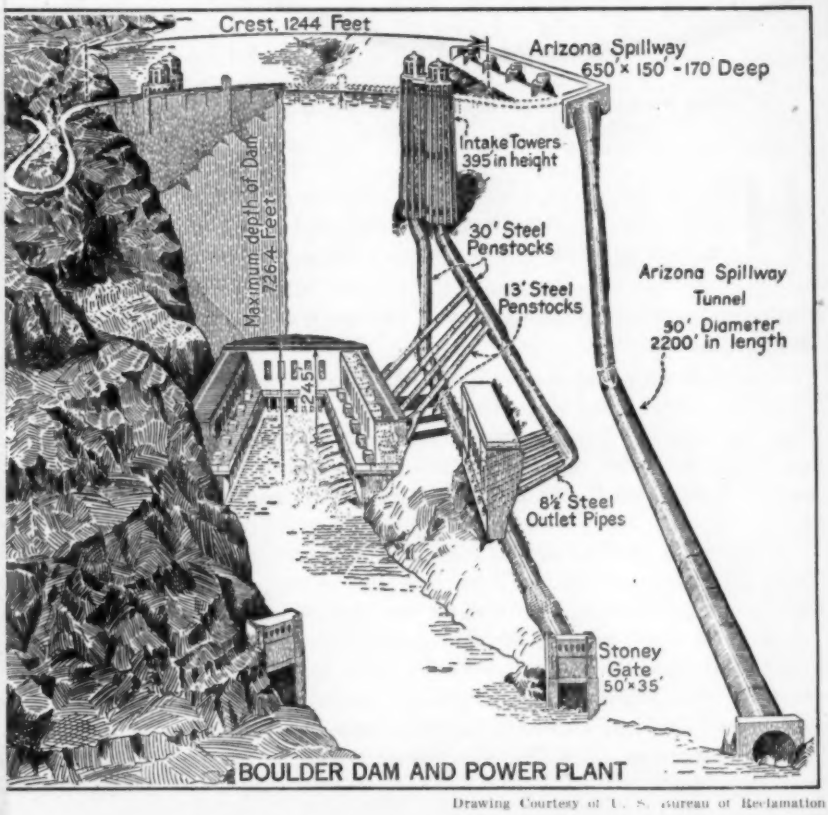


Charles Phelps Cushing

CIRCUIT BREAKERS at Boulder Dam on the 270-volt power line which carries electric current to the City of Los Angeles—longest transmission line in the United States—distance of 275 miles.



Drawing Courtesy of U. S. Bureau of Reclamation

★ Vocabulary Drill on Page 14

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in the United States is made from the energy of falling water.

PURPOSES OF DAMS

In recent years, many new dams have been built to harness the water of our rivers. Dams are built for several purposes: to control floods, to provide irrigation for arid regions, to improve navigation, to provide a drinking-and-washing water supply for cities, and to make electricity.

Some dams are built for only one of these purposes. Electric power plants are not built on many dams because the dams are far from cities or industrial regions. It would cost too much to transmit★ the electricity from the dam to the cty. In these cases it is cheaper to make the electricity in the city by burning coal. The burning coal heats water boilers, making steam which turns steam-turbines which turns the generator which makes the electricity.

The longest distance electricity is transmitted from a dam is 275 miles —from Boulder Dam on the Colorado River to Los Angeles, California. (See photo on front cover, and drawing on this page.)

DIESEL-ELECTRIC

Petroleum, too, is used to make electricity, though not to the extent that water and coal are used. The diesel-electrio locomotive on some railroads use oil for fuel. The oil is exploded by the heat of compressed air in the cylinders. This makes the diesel-electric locomotive on some turns the generator which makes the electricity. A diesel-electric locomotive is its own electric power plant.

Other electrified railroads get their electricity from an overhead wire, or a third rail.

Most ralroads use coal for power. Of 420,118 miles of track in the United States, only 6,855 are electrified.

In water transportation, it's just the other way around. Coal used to be the source of power on all ships. But today, most ships (including all our warships) use oil. The oil is used, just as coal was, to heat water boilers to make steam. This turns steam-turbines, which turned the screws (propeller shafts).

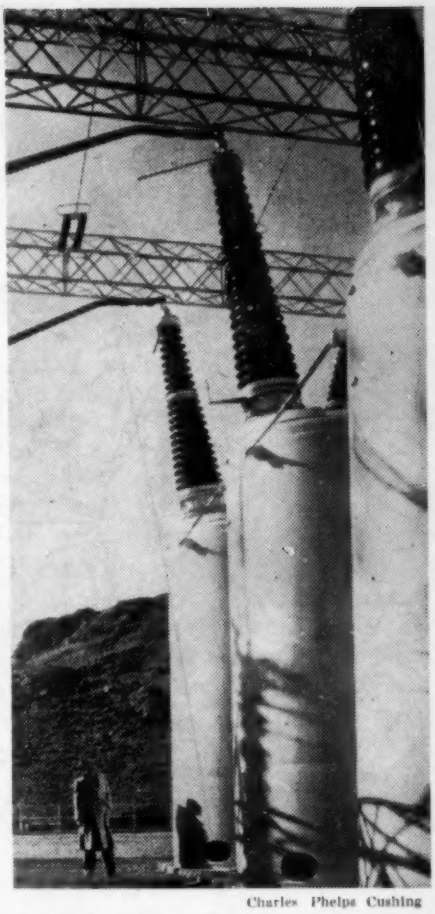
With the increased demands on our railroads, airplanes, trucks, ships, and factories because of our Defense Program, will we have enough power to operate them all?

The United States is very fortunate in having all the coal and oil we will need for years to come. We know there is enough coal to last several hundred years. How long our oil reserves will last is not known for certain. But there is no shortage in sight.

POTENTIAL POWER

In water power, we have enough power plants built to make 19 million horsepower of electricity each year. If we used all the waterfalls and built more dams, this amount could be increased to 57 million horsepower. This is called our *potential★ power*. That means it is there if we ever need it.

Other nations of the Western Hemisphere have not developed their power resources as the United States has. Canada has a potential water-power of 30 million horsepower a pear. Only 8 million of this has been developed. Mexico, Venezuela, and Columbia have large reserves of oil.



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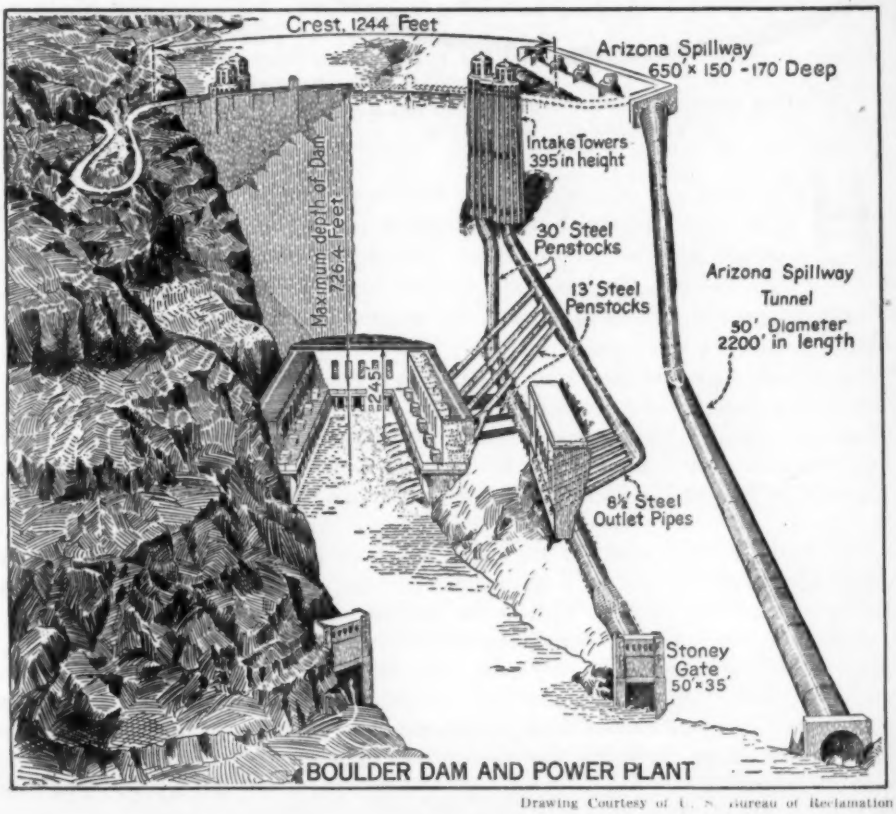

Drawing Courtesy of U. S. Bureau of Reclamation

HOW BOULDER DAM WORKS (illustration at right): Water enters dam through intake towers, falls through penstocks ★ into the power plant at the base of the dam. (See front cover.)

★ See Vocabulary Drill on Page 14

Illustration by Katherine Tracy

"It's like being lost in a forest or having a dream or something," Tuck said.

• • • • **BIB and TUCK**

MR. DING THE MUSIC TEACHER

"HEY, Tuck, got your stilts ready for the game this afternoon?" Scoops Nabors called to Tuck as he started up the school steps Friday morning.

"...atcha talking about – stilts?" Tuck waited for Scoops to catch up with him. "We've got Stretch Oglesby, haven't we?"

"Sure, but he's just one man. What about the rest?"

"Oh you don't have to be six feet tall in order to play good basketball," Tuck argued. "Some of the best college players – why there's Buck – I mean *Mr.* Messinger – he played for State College last year, and look at him— "

"Yeah, *look* at him – that's exactly what you'll be doing all afternoon, and he'll be like this!" Scoop made the motion of shooting the ball in the basket.

"Aw, you – say, there's Mr. Ding. He's been away at some music convention. . . . Hello, Mr. Ding," Tuck greeted Jefferson's music teacher and band and orchestra leader. "Did you know Coach Woodside was looking for you the other day? He wanted you for the game this afternoon."

"Game? What game?" Mr. Ding asked in surprise. "There isn't any game on this week's band schedule!"

"Oh, he didn't want the band. He wanted you to play for the Hot Shots."

"*Me* – to play for the w-w-what?" Mr. Ding gasped.

"The Hot Shots. Oh, I forgot you didn't know. That's the name of the faculty basketball team," Tuck explained. "They're playing us – the Jefferson Jumping Beans this afternoon in a special game for the benefit of the Athletic Fund. Coach Woodside got up the faculty team, but he could find only four men who were willing to play. He thought you might be willing to fill in."

Mr. Ding smiled and said, "I'll stick to clarinet playing."

"Well, anyhow, Mr. Ding, how about buying a ticket for the game?" Tuck produced a stack of tickets from his pocket. "How many? Ten cents for faculty and students. Fifteen cents for friends and relatives."

"One's enough, Tuck, thank you," Mr. Ding said in his pleasant, modest manner.

"Okay, sir, and thanks. Game starts at 3:45. Oh say, the Hot Shots got Mr. Slocum for their fifth man. But he's not a good player either."

Mr. Ding laughed at Tuck's slip, realizing that he meant no personal offense.

AT NOON, Tuck met Bo Tanner, captain of the JB's (Jumping Beans).

"It's going to be tough guarding those beanpoles," Bo remarked.

"Beanpoles!" Tuck repeated. "They're more like oil derricks. Every one except Mr. Messinger must be six feet tall."

THE gym was packed to the rafters for the game. Nearly everybody in school turned out, because here was a chance to see faculty members under a different kind of pressure.

As the teams lined up to start the game, the JB's certainly looked like midgets – all except Stretch at center, who was 6 ft. 2 in. – an inch taller than Mr. McKnight. Mr. Messinger wasn't so tall, but he was built like the Rock of Gibraltar. He and Coach Woodside were really good players.

Mr. Slocum, Mr. Lentz and Mr. McKnight hadn't the stamina of the younger Hot Shots. But they were able to catch and receive passes simply by keeping the ball high in the air and playing it over the JBs' heads.

By the end of the first quarter, the Hot Shots were

leading 12 to 4. Their height was a tremendous advantage.

The JB's couldn't seem to get going. "It's like being lost in a forest, or having a dream or something," Tuck said during a time-out.

But by the end of the first half, the Hot Shots had not increased their lead. The margin was just the same – 8 points. The score was 18 to 10.

In the locker room between halves, Bo and his JB's talked it over. "We're holding 'em better now. Did you notice they had to call three time-outs during the second quarter? They were all in."

"Let's make 'em run more," Tuck suggested. "We'll just keep running in and out of our front-court . . . passing the ball all the time . . . short passes. Don't take a shot unless it's a close one and you're wide open."

AS SOON as the JB's got the ball, they just kept passing it, cutting in and out of the corners and toward the sides of the court. The Hot Shots, playing a man-to-man defense, had to keep following the boys. At least that's what they tried to do.

But the pace was telling on them. Mr. Slocum let Bo Tanner run "open" for three set-up shots, two of which Bo made. And Stretch shook himself free for two goals. All the while, the Hot Shots scored only one field goal and a foul. Now the score was 21 to 18 as the third quarter ended.

"We're running 'em ragged. Just keep it up," Bo exhorted his team during the brief rest period.

"Say –" Tuck said. "Look, Coach Woodside's talking to Mr. Ding over there. What's up I wonder?"

"Maybe they're going to put Mr. Ding in the game," Stretch suggested.

"We should worry if they do," Tuck said. "I never heard of him playing anything except a clarinet."

But when the final quarter started, the Hot Shots' lineup remained unchanged. And their physical condition remained unchanged, too. Mr. Slocum, Mr. Lentz, and Mr. McKnight could scarcely move faster than a walk. The JB's netted three field goals and a foul, making the score 25 to 21, JB's leading.

At this stage, Coach Woodside called a time out for another rest.

"Say, Bo," Tuck suggested. "Let's offer to call the game off. I don't think they can go any further. It might not be good for their health."

"O.K. with me if it is with you fellows," Bo said. So he went to Coach Woodside and made the offer.

"Well, that's very sporting of you boys," the Coach said. "But there's only three minutes left to play. I think we can survive. Anyhow, we have a substitute coming in – Mr. Ding – he's down getting dressed."

Bo reported back to his team. "They're putting in Mr. Ding, and they want to finish the game for appearance's sake," he informed them.

PLAY was resumed with a bang! And a Ding! First thing, Mr. Ding made a tiger leap to intercept a pass, pivoted, whirled away on a long dribble, changed pace to avoid Stretch Oglesby, and continued to the basket, where he made an easy lay-up shot. It had happened so fast that the JB's were slightly bewildered. But Bo had enough presence of mind to call a time-out.

The JB's got into a huddle.

"Gosh, did you see what I saw?" Bo asked his team. "Where did he learn to do *that!*" Bo glanced at the scoreboard – 25 to 23.

"Tuck," Bo spoke severely, "Mr. Ding's your man. You gotta stop him."

"Aw, he's just a flash in the pan," Tuck said.

"Well, he handled that ball as though he knows what it's all about," Bo warned. "Better watch him."

As Tuck walked down court to resume play, he heard his sister, Bib, shouting at him from the bleachers. "Watch out for Mr. Ding!" Bib pleaded.

"Don't worry. That was just a flash of luck," Tuck replied, and instantly realized that Mr. Ding was right beside him. Noticing Tuck's embarrassment, Mr. Ding said to him: "That certainly was a lucky play."

THE crowd was in an uproar of excitement as play was resumed. It was JB's ball out of bounds. Tuck passed it in to Bo. Bo shouted to his teammates "Don't take any chances. Freeze the ball!"

"Freezing" it, the JB's made no effort to advance, but passed the ball among themselves in the center of the court. Coach Woodside ordered his men to close in. This forced the JB's to advance. As they did, Stretch Oglesby muffed a pass, and like a flash, Mr. Ding snared the ball, made that fast pivot of his and dribbled away toward his basket.

Tuck, who had gone ahead with the attack, reversed his direction, and tore pell-mell after Mr. Ding.

Tuck was gaining on him, and Mr. Ding knew it. Still 35 feet from the basket, Mr. Ding ended his dribble with a leap, aiming the ball for a one-handed long shot. Tuck was traveling so fast he could not change his direction, and he crashed into Mr. Ding from behind. But Mr. Ding had had his aim. While he and Tuck fell to the floor in a heap, the ball was swishing through the net for a field goal, tying the score at 25-25. And at that instant, the timekeeper's gong ended the fourth quarter.

As Mr. Ding and Tuck unscrambled themselves, Tuck made his apologies. Then he saw the referee coming with the ball. The referee handed it to Mr. Ding, and said: "Shoot a foul. It's a personal foul on Tucker for charging."

"Wow!" gasped Tuck. He looked at Bo and his other teammates.

There was nothing the JB's could do about it. The foul was an obvious one. They had to take their medicine. Now if Mr. Ding would only miss that foul shot!

Mr. Ding, with that very humble manner that characterized all his actions, stepped to the foul line, took his stance, eyed the basket, and tossed the ball so easily – almost gently. It went right to the mark as straight and as clean as those other Ding shots. It meant victory for the Hot Shots, 26 to 25.

The boys seemed so depressed as they walked off the floor, that Coach Woodside decided to follow them to their dressing room.

"Say, that was a tough one to lose," he said, trying to console them a little. "You boys played a smart game, so don't let it get you down too much."

"Coach," said Tuck in a tearful voice. "Did Mr. Ding ever play basketball before?"

"Did he ever PLAY!" the Coach repeated in amazement. "Why he was all-Western Conference forward at Wisconsin three years in a row."

As though this was not enough, Tuck remembered what he'd have to face at home with Bib. *A flash of luck!* Oh misery!

—GAY HEAD

FINLANDIA

THE STORY OF JEAN SIBELIUS AND THE MUSIC OF FINLAND

I am driven by my longing,
I will sing the people's legends,
And the ballads of the nation
—THE KALEVALA

REPORT ON THE NEW BOOK
"FINLANDIA" BY ELLIOTT ARNOLD,
PUBLISHED BY HENRY HOLT AND COMPANY

THOSE words are from the *Kalevala,* Finland's national folk-lore ballad, but they might have been written about a young man named Jean Sibelius, who sat almost fifty-five years ago before a table piled with law books. Through his open window came the noises of Finland's capital city, Helsinki.

To young Sibelius, those law books were the dullest books ever written. He did not want to become a lawyer. All he wanted to do was write music. He could hear the music of his native Finland singing inside him, inspired by the Finnish woods and lakes; by the legends of the *Kalevala.* Sibelius felt he must set this music down for all the world to hear. Then perhaps other countries would understand Finland's true greatness, and know that it must be freed from Russian rule.

Today, since the invasion of Finland by Russia in 1939, the Soviet Union controls much of Finnish territory. In 1883, all of Fnland had been under Russan domination for 74 years. Russian Czars made laws forbidding the Finns to speak, write, or read their own language. They wanted to stamp out Finnish culture and make the Finns into loyal Russian subjects.

But the patriotic Finns did not lose heart under this oppression. There is a quality in Finnish character which they call *sisu,* and it was *sisu* that gave them courage to endure the Russian yoke.

What is *sisu?* It is quiet courage, not the wild shouting kind, but the ability to take blow after blow, and then raise your tired arms and fight back. It comes from having constantly to struggle against odds. Finland has always had to fight something. At first it was nature, for Finland is a cold, forest-covered country. But the Finns turned the forests into a great lumber industry; they made the soil yield crops. Next, having conquered nature, the Finns had to fight two bigger nations – first Sweden and then Russia.

Sweden conquered Finland in 1154, and ruled it until the early 19th century when Napoleon's troops swept through Europe. Napoleon promised Finland to Russia as a reward for Russian help in the blockade against England, Napoleon's greatest enemy. Finland fought bravely against the Russians, but they were overcome at last, and in 1809 Sweden surrendered Finland to Russia. The darkest period in Finnish history began with Russian rule. Again the Finns called upon *sisu* to help them endure those troubled times.

Young Sibelius wanted to write music that would tell the world about *sisu.* But his family did not think he should make a career of music, and they sent him off to Helsinki to study law. Jean was miserable, but help came from a kindly uncle, who stepped in and gave the young man support and permission to direct all his time and energy to his beloved music.

Jean Sibelius writes his patriotic "Finlandia."

So Jean went to Berlin to study music, and then to Vienna. When he returned to Finland in the summer of 1881, he felt his training was sufficient for him to begin writing the music of his country the way it should be written. He worked at a terrific pace. No hours were too long for him, and his strength and inspiration seemed inexhaustible.

The Russian persecution of Finland had grown steadily worse during this time. Free speech was suppressed, the press was censored. Sibelius entered the struggle against Russia in the best way he could – by composing the song *Finlandia.* When the Finns heard it, they knew it was their national anthem, written to give them the courage to fight for their freedom. Sibelius wrote the song to inspire the Finnish patriots of 1899. He did not dream this same music would inspire Finnish soldiers in 1939!

When the armies of the first World War marched in 1914, Sibelius had achieved fame as a composer throughout the world. His 50th birthday was celebrated as a national holiday. He was too old for military duty, but his music made the Finns feel their land was something worth fighting for.

On a wind-swept, icy day in 1918, Sibelius sat in his study, his head buried in his hands. His heart was full of rage and despair at the idiocy of mankind. Mankind which was slaughtering itself in the World War. Mankind which was turning brother against brother, for there was civil war in Finland now. First there had been the granting of independence to the Finns by the Russian Kerensky Government; then the Bolsheviks took over Russia, and early in 1918,

civil war divided Finland against itself.

As Sibelius sat there, a knock sounded at the door. A detachment of Red soldiers had come to plunder his house for food and arms. Sibelius stood rigid with rage while they tramped through the house, stealing whatever they could. Terrified, the composer's children clung to him.

He drew himself up, and walked past the guards to the piano. Seating himself, he began to play. The courage and faith in his heart filled the music. It made his children realize they were Finns, and the daughters of a mighty Finn. It made the guards turn and leave, while Sibelius' music followed them triumphantly.

AT last the civil war stopped, and the Reds withdrew from Finland. Sibelius was happy, for the struggle of hundreds of years had brought Finland to freedom, and he had lived to see it. He began to know years of peace and comfort. But this peace did not last. In the fall of 1939, the Soviet Union made her first demands upon Finland, and once more Sibelius heard the distant tramp of Russian boots. On November 30, 1939, Russian troops invaded Finland, beginning almost where they had left off more than twenty years before.

There was a report that Sibelius had been killed in one of the air raids over Helsinki, but this proved untrue. He was alive and working at his music, under the endless hum of Russian planes, the endless explosions of Russian shells. Finland could not be destroyed, he said; not while there was a Finn left with a rifle in his hand; not while there was *sisu*.

Every Finn responded to the call of his country for soldiers. Despite his age, Sibelius refused to be an exception.

Peace was made in 1940; the peace which placed so much Finnish territory under Russian control again. Finland started rebuilding her even tinier country. As Finnish men and women worked, they sang the *Finlandia*. And in his own home, the man who had written that song for them once more went on with his own work.

Sibelius is 75 now, and ill with palsy. But neither age nor disease can keep him from writing Finnish music. He will go on as long as the air of Finland fills his lungs, as long as the sounds of Finland fill his ears, and the beauty of Finland fills his eyes.

—MARGARET SYLVESTER,
Junior Scholastic Book Editor

$60 IN PRIZES!

118 PRIZES

1st Prize	$25.00
2nd Prize	15.00
3rd Prize	10.00
4th Prize	15 Prizes of $1.00

100 Honorable Mentions— 1 lb. tins of Vacuum Packed Planters Peanuts

ENTER THE NEW PLANTERS WORD-BUILDING CONTEST!

Here's a simple, easy contest that offers you a cash prize - and a lot of fun along with it! All you have to do is to list as many six letter words as you can think of using the letters in the words *"Planters Peanuts Always Taste Good."* Just read the rules below — and start your list.

RULES

1. Anyone under the age of 21 years may compete.

2. The object of the contest is to build a list of words, containing six letters, using the letters in "PLANTERS PEANUTS ALWAYS TASTE GOOD." No letter may be used more times than appears in the above sentence. If you submit any verbs, use only the rst person present tense singular form. A word of several meanings may be submitted only once. Do not use abreviations, contractions, proper names, plurals, reformed spelling, possessives, suffixes or prefixes. Do not use archaic or obsolete words, dialectic words or variants. Foreign words which appear in the English section of standard dictionaries are acceptable. Webster's new International Dictionary will be the authority.

3. Send empty Planters Peanut bag or wrapper bearing a picture of Mr. Peanut with your entry, or send a hand-drawn facsimile of the label on the wrapper showing Mr. Peanut. On top of first page write your name, age, home address, city and state. Number each word and arrange list alphabetically. Fasten the bag, wrapper or picture securely to your entry.

4. Mail entries to Planters Contest Editor, Room 2412, 220 East 42nd Street, New York, N. Y. to arrive by April 26th, 1941. No entries accepted after that date.

5. Prizes will be awarded to those submitting the largest number of correct words. Neatness will be taken into consideration.

Winners will be announced in Scholastic, and Junior Scholastic, May 19th, 1941, issue. In the event of a tie for any prize offered, a prize identical with that tied for will be awarded each tying contestant.

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IMPROVE YOUR READING

By Saul B. Sells, Ph. D.

Reading for Purpose

A Deep Understanding

Power is magic which changed the world.

What was the world like when man could use only the power of his own body? How far could he travel? What loads could he lift? How much ground could he plow? What kind of clothes did he wear? What kind of dwellings did he have?

How did his world change when he learned to use animals to help him? He could now travel farther. He could lift heavier loads. He could plow more acres. Did this increased power change his way of living?

What was the effect of the use of the water-wheel? Did the power supplied by rivers and streams cause changes in people's lives? Did it create new occupations for man? Did it increase production? Did it create new wants and needs for people?

How did James Watt's steam engine, the gas engine and electricity change the world?

These questions call for a deep understanding of the importance of Power to our world. They do not ask for facts. They ask the meaning of facts. For example, the statement that *James Watt patented his steam engine in* 1769, is a fact. But to understand the full meaning of this invention, you have to know more than this bare fact. *Why* is James Watt's invention important to mankind? If you read with care, you will understand the importance of his invention. Here are two paragraphs on page 8, which help you get at the real meaning of James Watt's invention —

> When, in the year 1769, James Watt, patented his steam engine, a new Age of Power began. New kinds of machinery were invented to do the work that man used to do with his hands. More and more coal was needed to operate the steam engines that turned the machinery.
>
> Railroads were built to carry machinery, coal and manufactured goods to all parts of the country. Iron and steel mills operated full blast to meet the new demands.

Turn to page 8. *Read the Theme Article to obtain a deep understanding of the importance of Power to the world.*

Read carefully. Do not attempt to read quickly. Consult the questions at the beginning of this column as you read. Find important statements in the Theme Article. Write down in your notebook what you think each one means. When you finish, read the Theme Article over more quickly, to review the whole article. Then answer the questions below.

Indicate your answer by underlining in pencil, or checking, the ending which you believe is the correct one.

The Questions

1. One reason why the water-wheel did *not* bring about the Industrial Revolution was that (a) it could not operate heavy machinery; (b) there were not enough streams to provide power for many factories; (c) the people were not willing to give up their old methods of working.

2. The Power Age is called an Industrial Revolution because (a) it brought about great changes in our way of working and of living; (b) it hastened the organization of labor unions; (c) it created a demand for more coal and oil.

3. Which of the following is *not* an important reason for building dams: (a) to irrigate arid regions and improve crops; (b) to harness water power to make electricity; (c) to transmit electricity across the continent; (d) to improve navigation.

4. At the present time, less than 2% of the total miles of railroad in the United States are electrified. If there should be a great increase in electrification of railroads, what effect would this have on the coal industry? (a) Little, since coal would would still be needed to manufacture electricity; (b) it would greatly reduce the amount of coal mined and would therefore increase unemployment; (c) it would make little difference, because most railroads now use oil for fuel.

—

The correct answers are printed in the Teachers Edition.

KNOW THESE WORDS?

Check Your Vocabulary

★ *These words appear in this issue of Junior Scholastic. The accented syllable is capitalized.*

compromise (KOMM - proe - mize), page 5, second column. An agreement between two people, or two groups, in which each gives up part of what he has been claiming.

potential (poe - TENN - shul), page 9, second column. Possible as opposed to actual; it describes what can be or may be rather than what already is. From the Latin *potens*, "able."

penstock, page 9, picture caption. A sluice or tunnel for regulating the flow of water from a dam to a power station. From "pen" in the sense of "enclosure," plus "stock" in the sense of "stem."

reclamation (rek - luh - *MAY* - shun), page 8, photo credit line. The process of ***reclaiming*** or restoring wild or desert country to human uses by irrigating it and making it fit for agriculture. The U. S. Bureau of Reclamation is a bureau of our Government which builds dams and irrigation ditches to prevent floods and carry water to arid regions.

transmit (trans-MITT), page 9, first column. To send, carry, or *conduct* from one point to another. (See definition of *conductor,* Jan. 27 issue, page 17.) From the Latin *trans,* "across," plus *mittere,* "to send."

gas engine, page 8, second column. An engine which produces power by exploding gasoline, oil, or some other combustible fuel, inside a metal cylinder. A more accurate name for the gas engine is "internal combusion" engine.

Ericsson, Leif (ERR-ik-sun, LEEF; in Norwegian, LAFE), page 6, third column.

Sibelius, Jean (ZHAHN sih-BAY-lee-us), page 12, first column.

Reykjavik (RAKE - yuh - veek), page 6, second column.

FROM THE CENTER OF THE U. S. A.

PUPIL ADVISORY BOARDS for this week's Junior Scholastic are these two groups from the central region of the United States: Above—Central Junior High School of Kansas City, Missouri. Below—Belleville Junior High School, Belleville, Kansas.

The group from Central Junior High of Kansas City are members of the school's Searchlight Class. They edit and publish the school paper, *The Searchlight*. In the photo, they are, from left to right (girls): Helen Hefter, Dorothy Pemberton, Shirley Crain, Vertna Heumann, Dorothy Dean, Mary Lou Heller. (Boys): Stewart Schreiber, Charles McGinnis, Hugh McClure, Kenneth Wright, Lester Levin, Allan Bartlett.

BELLEVILLE JR. HIGH—Left to right (girls): Donna Jean Lewis, Anita Lee Lowell, Ellen Joyce Spurney, Barbara Adee, Marcy Mae Thomasson, Jeanne Arnone. (Boys): Burton Canfield, Joe Mendenhall, Bob Biederwell, Frankie Neal, Bob Davis, Ivan Rundus.

JSA CLUB

Jewels

By LUCILLE HANFORD

Fort Benton (Mont.) Jr. H. S.
Age 13 Grade 8

A myriad stars set in a winter sky—
A sighing wind, a lonely sentinel pine,
A western sunset from a mountain high;
I see them, hear them, they're forever mine.

A downy chick's first faint bewildered cheep,
A dew-drop on a blade of grass I find—
These treasures I will always value, keep;
They're gems I'll have forever in my mind.

The King Who Ate Too Much

By MARILYN ROSE TURNER

Junior High School, Springfield, Mo.
Age 12. Grade 7.

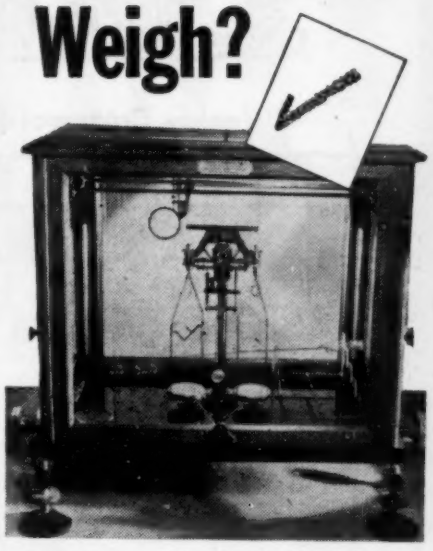
A long time ago in a kingdom in the West,
Lived a king who loved eating best.

Now, a king, you know, should be strong and wise;
But his strength and wisdom came from gooseberry pies.

He ate and ate from morning till night.
His royal girth increased and his clothes got too tight.

His life, I fear, was a short one indeed,
For he dug his grave with his teeth and his greed.

How much does a Pencil Mark Weigh?



IMAGINE a scale so finely balanced that it can weigh a delicate pencil mark. This amazing Analytical Balance performs this miracle with ease, precision, and accuracy. The tiny pencil mark reproduced above, for example, tips the scales at exactly 1/100 of a milligram—which is approximately one three-millionths of an ounce.

This precision instrument is one of the scientific working tools used in the Research Laboratories of Lehn & Fink, makers of Pebeco Tooth Paste and Tooth Powder. It is so sensitive that it must be kept in a special temperature-controlled room. Even the heat of your body may disturb its delicate balance.

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Makers of "Lysol" disinfectant
and Hinds Honey & Almond Cream

Weekly Crossword Puzzle

ACROSS

1. Highest diplomatic representatives (pl.).
8. Artificial water-courses (pl.).
10. Photo shows new U. S. ambassador to Great Britain.
12. Not wet.
13. Marine distress signal.
14. Tidy.
15. Showing marks of continuous wear.
18. The world revolves on this.
20. South American narcotic shrub.
21. Edge, as of a cup.
23. Pat with moist cloth.
24. Bred within, innate.
25. Here the British started their North African campaign.
26. Strait of Gibraltar and Suez Canal are sometimes called these.

DOWN

2. The moon's day.
3. Friend, accessory.
4. Raised platform at end of reception room.
5. Cause or motive; explanation.
6. Peninsula of Norway and Sweden.
7. Art of writing in shorthand.
9. Skill, dexterity.
11. At the present time.
16. City in Spain.
17. Libyan city captured by the British.
19. Title of respect.
20. Domestic animal of the genus Felis.
22. A plague.
23. Native of Denmark.

L. A. M.

ANSWERS: FEB. 17th ISSUE

Word Box:

N E P A L
E L A T E
P A S T E
A T T I C
L E E C H

Missing Five: crate, carat, react, cater.

Chain Gang: one, new, ewe, wed, tape, pear, area, ears.

Rescue the Words

Each of the missing words in the following sentence has four letters, and all four words are spelled with the same four letters. Can you supply the missing words?

The church bells began to _ _ _ _ just as the_ _ _ _ _ man rushed forward, and made his _ _ _ _ to be allowed to _ _ _ _ from the bridge in order to rescue the swimmer.

Answer next issue.

Three in One

Here are three words in one. Can you guess each of the three from this rhymed riddle? We'll give you a clue by telling you that the first one is a number.

When all one word, you'll find me odd
In everybody's eye.
Cut off my head, and then you'll see
I'm even as a die.
Then slice my tail off, and it shows
What brings each day to its close.

Answer next issue.

Joke of the Week

A JSA button goes to Lorraine Carey, 13, Junior H. S., Arrowsmith, Ill., for this joke:

First Wise Guy: "How far is it between your ears?"

Second Wise Guy: "A block."

It's Your Move

The tramp steamer was plowing through a thick fog. The chief officer, peering over the side of the bridge, suddenly saw a man leaning over a rail only a few yards away.

"You fool,' he roared. "What do you think you're doing? Don't you know *my* ship has the right of way?"

"Who's a fool?" came a sardonic voice in reply. "This isn't a ship! This is a lighthouse."

Ode to Emily

O M L E
What X T C
I always C
When U I C
I used to rave of L N's eyes
4 L C I gave countless sighs
4 K T 2 and L N R
I was a keen competitor
But each is now an N T T
4 U X L them all, U C

The West Higher, West H. S., Cleveland, Ohio

Boo-Hoo to You

Joe: "What would you say to a girl who's so nervous she jumps into the nearest man's arms if she's frightened?"

Bud: "I'd say 'Boo!' "

The Mast, Mastbaum Vocational School, Philadelphia, Pa.

Daffynitions

Toastmaster: One who pops up automatically.

Gum drop: A marshmallow in technicolor.

Silver: What goes under the Lone Ranger.

Zinc: A place to wash your hands.

Nitrate: Reduced prices on long-distance telephone calls at night.

Mirage: Where Yehudi keeps his car.

SOLUTION: FEB. 17th ISSUE

M	E	T	A	L	S		S	M	I	L	E
A		A		I				I	R	A	N
N	I	C	K	E	L		S	N	O	B	
G		T		S	O		T	E	N	O	R
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N		C	L	I	P		W	A	S		S
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